

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Bryan Franz Dufner et al

Examiner: Lois L. Zheng

Serial No.: 10/075,561

Art Unit: 1742

Filed: February 13, 2002

Docket No.: C-2199Re

Title: ELECTROCHEMICAL CELL WITH A
POROUS SUPPORT PLATE

I hereby certify that this correspondence is being facsimile
transmitted to the United States Patent and Trademark
Office (Fax No. 571-273-8300) on October 11, 2007.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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SUPPLEMENTAL RESPONSE

Sir:

In a telephone interview held on October 11, 2007, it was agreed that the claim 1 language "for increasing the capacitance of the cell" is a proper means-plus-function definition of an element and that claim 23 is superfluous and should be cancelled by the Examiner prior to the first Office Action. The issue of whether (a) the applicants' viewpoint, that the bi-layer is separate from the substrate layer which supports the bi-layer is correct, or (b) the Examiner's viewpoint that the bi-layer can be constructed within the substrate (as in Taniguchi et al), is correct. It was agreed that the amendments to claims 17 and 19 do require porous separation plates and also avoid the construction of Taniguchi et al that Taniguchi's electrodes read on the support plates, since Taniguchi's electrodes are in contact with the membrane, rather than with the membrane electrode assembly as claimed.

In the interview, another issue was whether the substrate layer has to be other than a substrate within which the philic and phobic material is disposed. To support applicants' view that claim 1 must be interpreted to require a substrate layer which is distinctly separate from the bi-layer, the following passages are quoted. Abstract, two-thirds down: "A porous substrate layer adjacent and supporting the contact bi-layer"; Abstract, near end: "transferring the contact bi-layer onto a porous substrate layer"; column 3, line 63: "a substrate layer adjacent and supporting the contact bi-layer"; column 4, lines 25 and 26: "transferring the contact bi-layer onto a porous substrate layer"; column 5, lines 38 and 39: "a first contact bi-layer 44 adjacent the anode electrode supported on a first substrate layer

46"; column 5, lines 40 and 41: "a second contact bi-layer 48 adjacent the cathode electrode supported on a second substrate layer 50"; column 9, lines 10-12: "transferring by filtering or depositing the contact bi-layer onto a planar surface of one of the substrate layers"; column 9, lines 36-39: "low-speed mixing of the flocculated hydrophobic and hydrophilic compounds together, and filter transferring the mixed hydrophobic and hydrophilic compounds onto one of the substrate layers 46, 50"; column 9, lines 56-62: "after the filtering...to form the contact bi-layer step and transferring the contact bi-layer to the substrate layer step, drying the substrate and contact bi-layer...and then heat treating the dried contact bi-layer and substrate layer"; column 10, lines 16-20: "manufacturing the porous support plate or manufacturing the contact bi-layer, and then laminating the contact bi-layer alone or together with the substrate layer as the porous support plate onto a cathode or anode electrode"; column 10, lines 23-25: "by placing the contact bi-layer alone or as part of the porous support plate is in contact with the anode electrode"; column 10, lines 24-27: "to the contact bi-layer or plate and anode electrode to secure the contact bi-layer or porous support plate and anode in contact with each other"; column 10, lines 41-42: "after the steps of transferring the contact bi-layer to the substrate layer".

It is submitted that the foregoing shows that the meaning of the phrase "supported on a porous substrate layer" in claim 1 is that the bi-layer is separate from and is supported on the substrate layer, rather than a hydrophilic and hydrophobic structure being formed by adding the -philic and -phobic material into a substrate as illustrated in Taniguchi et al.

Respectfully submitted,



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Date: October 11, 2007